

SOV/123-59-13-53006

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 13, p 381 (USSR)

AUTHOR: Romanenko, P.N.

TITLE: The Effect of Cooling the Parts of the Air-Gas Flow Space of Gas Turbines on the Efficiency of Gas Turbine Installations (GTI) ²³

PERIODICAL: Nauchn. tr. Mosk. leso-tekhn. in-t, 1958, Nr 9, pp 7 - 46

ABSTRACT: The effect of heat elimination from the cooled turbine blades on the inner efficiency of a gas turbine and on the efficiency of the GTI are rated. The method is based on the determination of the index of the polytropic curve of gas expansion in the cooled stage. It is shown that the optimum degree of pressure increase in GTI with a cooled turbine is higher than that with a not cooled one.

B.I.A. ✓

Card 1/1

DORFMAN, A.Sh., kand.tekhn.nauk; POL'SKIY, N.I., kand.fiz.-mat.nauk;
ROMANENKO, P.N., prof., doktor tekhn.nauk

Simulating solutions of laminar boundary-layer equations of a
compressible liquid associated with heat exchange. Nauch.trudy.
MTI no.9:165-174 ' 58. (MIRA 11:12)
(Boundary layer) (Differential equations)

Approved for Release

AUTHOR: Dorfman, A.Sh., Pol'skiy, N.I., and 40-22-2-19/21
Romanenko, P.N. (Kiev)

TITLE: Similar Solutions of the Equations of a Laminar Boundary Layer
in a Compressible Liquid in Presence of Heat Exchange
(Avtomodel'nyye resheniya uravneniy laminarnogo pogrannichnogo
sloya v szhimayemoy zhidkosti pri nalichii teploobmena)

PERIODICAL: Prikladnaya matematika i mekhanika, 1958, Vol 22, Nr 2,
pp 274-279 (USSR)

ABSTRACT: For the solution of different problems of boundary layer theory
the partial differential equations were frequently transformed
into ordinary ones. In this way it was possible to find similar
solutions of the boundary layer theory. For the case of an in-
compressible liquid without heat exchange these similar solu-
tions have been completely treated. For the case of the plate
boundary layer also similar solutions for compressible liquids
have become known. In the present paper the authors now in-
vestigate the case of a compressible liquid and in doing so
they assume the existence of heat exchange. All similar
solutions of the boundary layer equation for this case are
enumerated, and it is shown that further similar solutions do

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Similar Solutions of the Equations of a Laminar Boundary Layer 40-22-2-19/21
in a Compressible Liquid in Presence of Heat Exchange

not exist.

Starting from the well-known boundary layer equations the system of initial equations is brought to a simpler form with the aid of a transformation given by Dorodnitsyn. For the case that the Prandtl number is $= 1$, the system of equations is split up into the following equations:

$$\varphi''' + 2f\varphi'' = 0$$

$$g'' + 2f g' + 4n \varphi' g = 0$$

The first of these equations is the well-known Blasius equation for the stream potential φ . The second equation renders it possible to determine the course of the temperature in the boundary layer. It can be solved with the aid of well-known methods, e.g. with the method of Galerkin.

It has to be emphasized that in the present case the notion of similarity refers to the coordinates of Dorodnitsyn. This similarity is not always identical with the similarity in the plane of the initial magnitudes.

There are 7 references, 3 of which are Soviet, 3 American, and 1 German.

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Similar Solutions of the Equations of a Laminar Boundary Layer in a Compressible Liquid in Presence of Heat Exchange 40-22-2-19/21

SUBMITTED: January 12, 1957

1. Laminar boundary layer--Mathematical analysis
2. Laminar boundary layer--Heat transfer

Card 3/3

ROMANENKO, P.N.

Distribution of velocities and temperatures in the front section
of a gas jet. Nauch.dokl.vys.shkoly; energ. no.1:169-174
'59. (MIRA 12:5)

1. Rekomendovana Moskovskim letotekhnicheskim inatitutom.
(Jets--Fluid dynamics)

ROMANENKO
RAMANENKO, P. N., LEONT'EV, A. I., and ABLIVIN, A. P.

"Investigation of Heat Transfer and Resistance at Motion of
a Heated Air in Diffusers and Confusers."

Report submitted for the Conference on Heat and Mass Transfer, Minsk
BSSR, June 1961.

1 10090-66 EPA/EWT(1)/EWT(m)/ETC(F)/EPF(n)-2/ENG(m)/EWA(d)/T/FCS(k)/EWA(c)/EWA(1)

ACC NR: AT6001362 WW/JW/JWD/WE/GS SOURCE CODE: UR/0000/65/000/000/0164/0171

AUTHOR: Romanenko, P. N. (Moscow); Oblivin, A. N. (Moscow)

ORG: none

TITLE: Experimental study of friction and heat transfer in a gas flow through a diffused duct with cooled walls in the presence of combustion 44,55

SOURCE: Teplo- i massoperenos. t. 1: Konvektivnyy teploobmen v odnorodnoy srede (Heat and mass transfer. v. 1: Convective heat exchange in a homogeneous medium). Minsk, Nauka i tekhnika, 1965, 164-171

TOPIC TAGS: combustion chamber, heat transfer radiation, combustion

ABSTRACT: ^{21, 44, 55} Heat transfer and friction in the ^{1, 55} turbulent flow of burning gases is of considerable interest for studying liquid fuel combustion. In a previous study by S. S. Filimonov, et. al. (Konvektivnyy i luchisty teploobmen. Izd. AN SSSR, 1960.), the radiative and convective components of heat transfer were determined under these conditions using radiometers. The results showed that q_{con}/q_{rad} , where q_{con} is the heat flux due to convection and q_{rad} , the heat flux due to radiation, depends only slightly on the Re number and remains practically constant up to a Re of 3×10^3 . The experimental assembly used in the present study contained a compressor, an electric heater, a BK-1F turbojet combustion chamber, and a test section for studying heat transfer from the hot combustion gases to the walls. The experiments were conducted

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ACC NR: AT6001362

with kerosine as fuel at stagnation temperatures of 913—1303K, flow velocities of 136—200 m/sec, and wall temperatures of 313—328K. The total heat flux was measured by calorimetric measurement in the test section, q_{rad} was determined by a radiometer, and q_{con} was calculated. From q_{rad} and q_{con} , the Stanton number ratio St_{rad}/St_{con} was plotted as a function of the Re number. When Re was 5×10^4 , the radiation flux amounted to 50% of the overall heat transfer, and at Re 15×10^4 , it amounted only to about 20%. Thus, the radiation transfer decreased sharply as the flow velocity increased. A stepwise procedure for determining q_{con} is outlined. Orig. art. has: 2 figures and 2 formulas. [PV]

SUB CODE: 21/ SUBM DATE: 31Aug65/ ORIG REF: 017/ OTH REF: 001/ ATD PRESS:

4175

HW
Card 2/2

L 13455-66 EWT(1)/EWP(m)/ETC(F)/EPF(n)-2/EWG(m)/EWA(d)/FGS(k)/EWA(1) WW
 ACC NR: AT6001365 SOURCE CODE: UR/0000/65/000/000/0203/0212

AUTHOR: Romanenko, P. N. (Moscow); Krylova, N. V. (Moscow)

ORG: none

TITLE: The effect of entrance conditions on heat transfer in the
 initial tube section during turbulent air flow

SOURCE: 1, 55 Teplo- i massoperenos. t. 1: Konvektivnyy teploobmen v
 odnorodnoy srede (Heat and mass transfer. v. 1: Convective heat
 exchange in a homogeneous medium). Minsk, Nauka i tekhnika, 1965,
 203-212

TOPIC TAGS: heat transfer, fluid flow, airbreathing propulsion,
 entrance effect

ABSTRACT: The effect of the entrance geometry on the heat transfer in
 a pipe flow was studied with a test section consisting of a copper
 tube 0.047/0.05 m in diameter, and 1.5 m long, which was equipped with
 a jacket divided into 15 compartments for calorimetric measurements.
 The following entrance sections were used: converging sections with
 convergence angles of 30°, 45° and 60°, stepwise reduction of diameter
 $D_2/D_1 = 4.3$, stepwise enlargement of diameter $D_2/D_1 = 0.5$, a straight
 pipe section for flow stabilization, and a section with gradual

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ACC NR: AT6001365

transition. The experiments were conducted at Re numbers of 5×10^4 to 8.7×10^5 , air temperatures of 470—650K, air velocities of 30—300 m/sec, and wall temperatures of 300—335K. Plots of the St vs. Re numbers were obtained for the various entrance geometries. By processing the results, a method was developed for calculating the local heat transfer coefficients as a function of the entrance geometry. Orig. art. has: 17 formulas and 2 figures. [PV]

SUB CODE: 13, 20 SUBM DATE: 31Aug65/ ORIG REF: 014/ ATD PRESS: 4186

Cord 2/2

L 11654-66 EWT(m)/EWT(1)/EWP(e)/EWP(m)/ETC(F)/EPF(n)-2/EWG(m)/EWP(v)/EWP(j)/EWP(b)/

ACC NR: AP6002006 EWA(c)/ETC(m)/EWA(1) SOURCE CODE: UR/0170/65/009/006/0816/0833
RPL IG/WW/RM/WH

AUTHOR: Romanenko, P. N.; Kharchenko, V. N.; Semenov, Yu. P.

ORG: Institute of wood technology, Moscow (Lesotekhnicheskii institut)

TITLE: The effect of coolant injection on heat transfer and friction in the turbulent boundary layer

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 9, no. 6, 1965, 816-833

TOPIC TAGS: heat transfer, cooling, transpiration cooling, nozzle cooling

ABSTRACT: One of the most effective means for protecting walls from the effect of high temperature gases is transpiration cooling effected by injection of liquids or gases through the porous wall into the boundary layer. This subject is reviewed in the present survey article which covers a total of 86 studies including 35 Soviet works. Cases with chemical reaction in the boundary layer are not considered. Among the Soviet studies reviewed, the following articles deserve mentioning: Three theoretical studies by Motulevich, in which transpiration cooling is analyzed and the integration of the boundary layer equations is attempted. Kutateladze presented analyses, made with the assumption that the sublayer is destroyed and that boundary layer conditions are similar to those at an infinite Reynolds number. These studies yielded relationships for the friction and heat transfer coefficients as a function of the intensity of the coolant injection. Romanenko studied the injection of air,

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UDC 532.526+536.24

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ACC NR: AP6002006

helium, carbon dioxide, and freon-10^{7,44,55} into a subsonic turbulent boundary layer on a porous copper plate experimentally. ^{44,55}Mugalev's studies with the injection of air and other gases through a porous plate into a sub- or supersonic air stream included methods for calculating the heat and mass transfer. ^{44,55}Sergeev studied the intensification of heat transfer by use of coolants, such as water, acetone, benzene, and butanol, which evaporate. Equations for calculating the heat and mass transfer during the evaporation of liquids from porous ceramic plates were derived. ^{44,55}Igachenko studied cooling by injecting water through a porous copper plate, and ^{44,55}Fedorov measured velocity and temperature fields when water is injected through a porous ceramic plate. ¹⁵Orig. art. has: 5 figures and 20 formulas. [PV]

SUB CODE: 01/ SUBM DATE: 16Jul65/ ORIG REF: 040/ OTH REF: 046/ ATD PRESS: 4195

Card

2/2

L 1988-66 ENT(1)/ENP(m)/ENT(m)/EPF(c)/EWA(d)/ENP(j)/T/FCS(k)/ETC(m)/EWA(l)
RPL RM/WE/WW/JW

ACCESSION NR: AP5022390

UR/0170/65/009/003/0384/0390

536.753

AUTHOR: Romanenko, P. N. ; Kharchenko, V. N. 44.55

TITLE: Evaluation of the loss of kinetic energy of fluid flow in tubes 60
144.55. 57
B

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 9, no. 3, 1965, 384-390

TOPIC TAGS: thermodynamics, irreversible process, chemical separation

ABSTRACT: Using the methods of the thermodynamics of irreversible processes, it is possible to establish the main characteristics of flows of liquids in channels with constant and changing cross sections. Generalized experimental data have permitted the determination of optimal conditions in the operation of a separation column. The present article uses this method to evaluate the loss of kinetic energy of a moving gas in a tube with injection of a homogeneous gas. The mathematical treatment of the problem is carried through in cylindrical coordinates. A figure shows the calculated change in the relative velocity for different rates of gas injection. The velocity drop along the length of the tube decreases with an

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ACCESSION NR: AP5022390

increase in the blowing (injection) rate and, with large consumptions of the injected gas, the velocity also increases along the length. For the calculation, the velocity of the air flow was taken as 100 meters/sec and the air density was taken to correspond to a temperature of 300 K. Orig. art. has: 23 formulas and 2 figures

ASSOCIATION: Lesotekhnicheskii institut, g. Moskva (Wood Technology Institute, Moscow)

SUBMITTED: 00

ENCL: 00

SUB CODE: ME, TD

NR REF SOV: 005

OTHER: 002

Card 2/2

L 35092-65 EWT(1)/EWP(m)/EWT(m)/EPF(c)/EPF(n)-2/ENG(m)/EPR/EWP(j)/T/FCS(k)/
EWA(1) Pc-4/Pd-1/Pr-4/Ps-4/Pi-4/Pi-4 WVL/RM
ACCESSION NR AM5009811 BOOK EXPLOITATION UR/ 536.242/246 56
BT/

Romanenko, Pavel Nikanorovich

Heat-transfer and friction in the gradient flow of liquids (Toploobmen i treniye pri gradiyentom techenii zhidkostey) Moscow, Izd-vo "Energiya", 1964, 366 p. illus., biblio. Errata slip inserted. 2,700 copies printed

TOPIG TAGS: heat transfer, friction, fluid flow, incompressible fluid, laminar boundary layer, turbulent boundary layer, gas flow

PURPOSE AND COVERAGE: The principles and the theory of friction and heat-transfer on the surfaces of bodies flowing around incompressible liquid and gas with great velocities and high temperatures during a change of pressure in the direction of the flow are presented. The flow of impermeable and porous surfaces in liquid and gas during the presence of a cross current in the latter in conditions of laminar and turbulent formation of boundary layers is also examined. Exact and approximate solutions of the equations of a laminar boundary layer are presented. Methods of calculating the turbulent boundary layer are given. The book is intended for scientific workers working with problems of heat transfer. It can also be useful for engineers of construction bureaus and design institutes concerned with heat transfer and friction in the design of technical devices.

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ACCESSION NR 5009841

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Bibliography -- 356

SUBMITTED: 19Nov64

NO REF SERV: 047

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SUB CODE: ME, TD

OTHER: 109

ROMANENKO, Pavel Nikanorovich; ROYTMAN, Miron Yakovlevich; BRAUN,
P.M., red.

[Fire prevention measures for heating and ventilation
systems] Pozharnaia profilaktika otopitel'no-ventiliatsion-
nykh sistem. Moskva, Izd-vo lit-ry po stroitel'stvu
"Stroiizdat," 1964. 251 p. (MIRA 17:6)

ROMANENKO, Pavel Nikanorovich, prof.; MOROZOV, Aleksandr Viktorovich,
dots. Prinsipal uchastiye RODIONOV, Ye.L., inzh.; PITERMAN,
Ye.L., red. izd-va; KARLOVA, G.L., tekhn. red.

[Arrangement and design of boiler units for industrial
boiler rooms] Komponentka i raschet kotloagregatov
promyshlennykh kotel'nykh. Moskva, Goslesbuzmizdat,
1963. 307 p. (MIRA 17:2)

TRUBNIKOV, V.M., kand. tekhn.nauk; ROMANENKO, P.N., prof., red.;
TETERINA, Z.Ya., red.

[Aerodynamic design of a boiler unit] Aerodinamicheskii
raschet kotel'nogo agregata; metodicheskoe posobie. Pod
red. P.N.Romanenko. Moskva, 1959. 37 p. (MIRA 17:2)

1. Moscow. Lesotekhnicheskii institut. Kafedra teplo-
tekhniki i teplosilovykh ustanovok.

LYKOV , A.V., akademik, red.; SMOL'SKIY, B.M., prof., red.;
 SHASHKOV, A.G., kand. tekhn. nauk, red.; PLYAT, SH.N.,
 kand. tekhn. nauk, red.; POMERANTSEV, A.A., prof., red.;
 ROMANENKO, P.N., prof., red.; PEREL'MAN, T.L., kand. fiz.-
 mat. nauk, red.; YAROSHEVICH, O.I., kand. tekhn. nauk, red.;
 BEL'ZATSKAYA, L., red. izd.-va; TIMOFEEV, L., red. izd.-va;
 SIDERKO, N., tekhn. red.; VOLOKHANOVICH, I., tekhn. red.

[Heat and mass transfer] Teplo i massopereenos. Minsk, Izd-
 vo AN BSSR. Vol.1. [Thermophysical characteristics of materials
 and methods for their determination] Teplofizicheskie kharakte-
 ristiki materialov i metody opredeleniia. Pod obshchei red. A.V.
 Lykova i B.M.Smol'skogo. 1962. 216 p. Vol.5. [Methods for
 calculating and modeling heat-and mass-transfer processes] Meto-
 dy rascheta i modelirovaniia protsessov teplo- i massoobmena.
 1963. 471 p. (MIRA 16:10)

1. Vsesoyuznoye soveshchaniye po teplo- i massoobmenu. 1st,
 Minsk, 1961. Akademiya nauk Bel.SSR (for Lykov).
 (Materials--Thermodynamic properties)
 (Heat--Transmission) (Mass transfer)

ROMANENKO, P.N., prof.

Gas-turbine units for the power plants of lumbering enterprises.
Trudy TSNIIME no.27:55-69 '61. (MIRA 15:4)
(Electricity in lumbering) (Gas turbines)

LEONT'YEV, A.I. (Moskva); OBLIVIN, A.N. ROMANENKO, P.N. (Moskva)

Resistance and heat transfer in turbulent air flow in axisymmetric
channels with a longitudinal pressure gradient. PMTF no.5:16-25
S-O '61. (MIRA 14:12)

(Aerodynamics)
(Heat---Transmission)

39603

S/196/62/000/014/026/046
E194/E155

AUTHORS: Romanenko, P.N., and Leont'yev, A.I.

TITLE: An experimental study of the turbulent boundary layer during motion of gas in axially-symmetrical diffusers with cooled walls

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.14, 1962, 4, abstract 14 G 19. (Tr. Mosk. in-ta inzh. zh.-d. transp., no.139, 1961, 134-158).

TEXT: Experimental investigations are necessary because of the difficulty of applying statistical theory to the study of anisotropy of turbulence. Results are given of an investigation of a turbulent boundary layer during flow of hot air in diffusers of circular section with cone angles of $8^{\circ} 4'$ and 12° . By using an axially-symmetrical diffuser it is possible to exclude the influence on the calculation of local resistance factors and other characteristics of three-dimensional gas flow. The data are generalised and as a result, recommendations are made for calculating the dynamic boundary layer and the thermal boundary

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X

An experimental study of the ...

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layer giving turbulent flow of a gas in axially symmetrical ducts with longitudinal pressure gradient and heat exchange. Analysis of the experimental data indicates that existing methods of calculating a turbulent boundary layer are not confirmed by experiment during the motion of gas in an axially-symmetrical diffuser with cooled walls. The proposed method of calculation is in good agreement with test results both for integral characteristics of the turbulent layer and for local values of the coefficient of friction.
15 references.

ASSOCIATION: Moskovskiy lesotekhnich. in-t
(Moscow Lumber Technical Institute)

[Abstractor's note: Complete translation.]

Card 2/2

ROMANENKO, P. N., LEONT'YEV, A. I. and OBLIVIN, A. N.

"Investigation of heat-exchange and resistance in the motion of heated air in diffusers and confusers."

Report presented at the 1st All-Union Conference on "Heat- and Mass- Exchange, Minsk, BSSR, 5-9 June 1961

31244

S/207/61/000/005/003/015

D237 D303

26.2/86
26.2/81

AUTHORS: Leont'yev, A.I., Oblivin, A.N., and Romanenko, P.N.
(Moscow)

TITLE: Investigating resistance and heat exchange for supersonic air flow in axially symmetrical ducts in the presence of a longitudinal pressure gradient

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 5, 1961, 16 - 25

TEXT: This is an account of experimental work on the characteristics of a turbulent boundary layer during the passage of heated air through diverging and converging ducts with cooled walls. Angles of divergence used were $8^{\circ}4'$ and 12° , angle of convergence was 8° . The range of Reynolds numbers covered was $R = 1.688 \times 10^5$ to $R = 8.46 \times 10^5$. Temperature range of water cooled walls was $286^{\circ}\text{K} - 320^{\circ}\text{K}$, while that of air was $425^{\circ}\text{K} - 623^{\circ}\text{K}$. Flow velocity was up to $M = 0.5$. Ducts were sectioned and the following data were recorded: Air pressure before passing the heater and before the duct entrance. X

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Investigating resistance and ...

ce, temperature of air on leaving the heater, temperatures of air, walls and water and pressures in each section, and amount of water used for cooling. Microthermocouples and micro-Pilot tubes were used to obtain the readings. Graphs were constructed of velocity and pressure distribution in the boundary layer and used to determine its integral characteristics. Graphs of variation of velocity temperature and density in non-turbulent part of flow were used to calculate tangential stress τ_w and heat flow q_w on the walls of the duct. It was shown that pressure gradient Γ has little influence on temperature distribution in the boundary layer. In the turbulent part of the layer, however, the similarity between velocity and temperature field disappears. Calculations of the dynamic boundary layer led to the conclusion that a method can be used analogical to that used by A. Buri (Ref. 1: Eine Berechnungsgrundlage für die turbulente Grenzschicht bei beschleunigter und verzögerter Strömung, Dissertation, Zürich, 1931), if the pressure gradients are positive and rate of heat transfer is small; the thermal boundary layer was dealt with in a similar manner. Finally, Reynold's analogy of heat and motion transport was discussed in view of the experimental

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Investigating resistance and ...

data and it was concluded that it does not agree with experiment in case of the turbulent boundary and hence τ/q ratio is not constant. Yu.P. Semenov, A.K. Voskresenskiy, V.N. Kharchenko, and L.G. Shelegova are mentioned for their help in the experiment. There are 10 figures and 17 references: 3 Soviet-bloc and 14 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: F.H. Clauser, Turbulent boundary layer in adverse pressure gradients, J.A.S., 1954, v. 21, no. 2, 91-108; G.C. Brebner, I.A. Baglay, Pressure and boundary layer measurements on a two-dimensional wing at low speed R. and M. 1952, no. 2886; G.B. Schubauer, P.S. Klebanoff, Investigation of separation of the turbulent boundary layer NACA Rep. 1030, 1950; D.A. Spence, The development of turbulent boundary layers. IAS, 1956, v. 23, 3 - 15.

SUBMITTED: May 27, 1961

Card 3/3

28330 S/124/61/000/005/016/032
A005/A130

10 3100

AUTHORS: Dorfman, A. Sh., Pol'skiy, N. I., Romanenko, P. N.

TITLE: Self-simulating solutions of equations for the laminar boundary layer in a compressible fluid in the presence of heat exchange

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 5 1961, 73, abstract 5B457.
(Nauchn. tr. Mosk. lesotekhn. in-t, 1958, no. 9, 165 - 174)

TEXT: The authors give a compendium of all possible self-simulating solutions of the problem of a laminar compressible boundary layer with a pressure gradient and heat exchange; they apply Dorodnitsyn variables. For a Prandtl number $P \neq 1$, self-simulating can be obtained only under the conditions $u_1 = \text{const}$ and $T_w = \text{const}$ (u_1 is the velocity outside the layer, T_w is the wall temperature). For $P = 1$, self-simulating solutions are possible only in cases when

- 1) $u_1 = \text{const}$, $T_w = (\rho + c)^n$
- 2) $u_1 = (a\xi + b)^n$, $T_w = \text{const}$
- 3) $u_1 = ae^{b\xi}$, $T_w = \text{const}$

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Self-simulating solutions of equations for...

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A005/A130

(ξ is the Dorodnitsyn variable, A, a, b, c are constants). There are 7 references.

Ye. Obroskova

[Abstracter's note: Complete translation]

Card 2/2

ROMANENKO, P.P.

Hydraulic unloading of beets from trucks. Sakh.prom. 30 no.7:35-36
Jl '56. (MLRA 9:11)

1. Linovitskiy sakharney zavod.
(Sugar beets) (Loading and unloading)

ROMANENKO, P.P.

Create necessary working conditions for raw material sections of sugar refineries. Sakh.prom. 30 no.12:8:9 D '56. (MIRA 10:1)

1. Linovitskiy sakharney zavod.
(Sugar industry--Equipment and supplies)

SOV/136-58-10-25/27

AUTHORS: Nosulenko, A.I. and Romanenko, P.S.

TITLE: Readers' Conference of Beneficiation Workers (Chitatel'-skaya konferentsiya obogatiteley)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 10, p 96 (USSR)

ABSTRACT: At the Tekeliyskaya obogatitel'naya fabrika (Tekeli Beneficiation Works) on July 3, 1958, a conference heard descriptions of new beneficiation equipment and methods based on material published in Tsvetnyye Metally, Gornyy Zhurnal, Byulleten' Tsentral'nogo instituta informatsii (Bulletins of the Central Information Institute) and Kaz NII and also new books. The following communications were made: by B.M. Berdnikov on new crushing equipment and automation; by P.S. Trofimov on new grinding-flotation equipment; by N.A. Kryukova on new flotation reagents; by S.B. Ardasenov on hydrocyclone operation; by G.S. Romanenko on foreign lead-zinc flotation practice. After discussions on these reports, N.F. Mogilev (Tekeli Works) summarised the proceedings and expressed the hope

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Readers' Conference of Beneficiation Workers SOV/136-58-10-25/27

that similar conferences would be held in the future.

Card 2/2

ROMANENKO, S.M., kand. tekhn. nauk [deceased]; TAMRAZOV, P.M., inzh.

Basic thermodynamic problems of flows with consideration of real boundary conditions. Izv. vys. ucheb. zav.; energ. 2 no.1:23-32
Ja '59. (MIRA 12:7)

1. Kiyevskiy ordena Lenina politekhnicheskoy institut. Predstavlena kafedroy teoreticheskoy i obshchey teplotekhniki.
(Thermodynamics) (Gas flow)

ROMANENKO, S.P.

Work organization in the pouring bay. Metallurg 8 no.12:17-18
D '63. (MIRA 17:4)

1. Chelyabinskiy metallurgicheskiy zavod.

24.5100

34162
S/196/62/000/002/014/023
E194/E155

AUTHORS: Romanenko, S.V., and Chebotarev, V.A.
TITLE: Polytropic processes with variable specific heats
PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika
no.2, 1962, 5, abstract 26 37. (Izv. Kiyevsk.
politekhn. in-ta, 30, 1960, 3-9)
TEXT: The concept of specific heat of a polytropic process C^*
in accordance with the equation $dq = C^* \cdot dT$, is introduced and
its general properties are investigated. Any thermodynamic
process whose equation is generalised by a multiplicity of partial
thermodynamic processes is termed a polytropic process. It is
noted that in the general case the specific heats of polytropic
processes are determined by action on a working substance external
to the medium and are not associated with the concrete form of the
equation of state. An equation is derived for a polytropic
process with varying specific heats for an ideal gas, which
generalises all the particular cases including that of a
polytropic process with constant specific heat. It is recommended
Card 1/2

34162

Polytropic processes with variable ... S/196/62/000/002/014/023
E194/E155

to take the value of C^* as the main characteristic of the polytropic process. The circumstance that C^* does not depend on the properties of the working substance offers in principle the possibility of 'thermodynamic modelling' of working processes in technical equipment using other working substances, for instance, by altering the composition of the working mixture replacing a mixture of gases (or steam) by air and so on. Here, it is assumed that the working process is reversible.

Abstractor's note: Complete translation.

Card 2/2

S/081/62/000/002/006/107
B149/B108

AUTHORS: Romanenko, S. V., Chebotarev, V. A.

TITLE: Polytropic processes with variable specific heats

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1962, 49-50,
abstract 2B351 (Izv. Kiyevsk. politekhn. in-ta, v. 30,
1960, 3-9)

TEXT: The specific heat in a polytropic process and for an arbitrary equation of state was investigated. Polytropic is called any thermodynamic process the equation for which incorporates a multitude of separate thermodynamic processes. The specific heat is determined as the coefficient of proportionality at the temperature differential connecting the latter with the heat differential. It is established that specific heat is a function of a single variable, e.g. temperature. This result is correct for any working body. The specific heat for a polytropic process is in general determined by the effect of the external medium on the working body and is not directly related to the equation of state. An equation has been derived for a polytropic process with variable specific

Card 1/2

Polytropic processes with variable ...

S/081/62/000/002/006/107
B149/B108

heats for an ideal gas. In the derivation it was assumed that the specific heat in a polytropic process as well as the specific heats at constant pressure and volume are linearly dependent on temperature. The equations obtained include all known thermodynamic processes. [Abstracter's note: Complete translation.] ✓

Card 2/2

S/123/61/000/004/023/027
A004/A104

AUTHORS: Romanenko, S. V., and Tamrazov, P. M.

TITLE: New methods of gas-dynamic calculations of heat-exchangers

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 4, 1961, 7, abstract 4131. ("Izv. Kiyevsk. politekhn. in-ta", 1960, vol. 30, 13-30)

TEXT: The authors present some versions of plotting gas-dynamic calculations of heat exchangers operating on the principle of forward flow or counterflow. The formulae being recommended are simple enough, do not require auxiliary graphings and are not limited by assumptions on the nature of temperature changes of the wall or on the temperature pressure between the heat-transfer agents. There are 5 figures and 6 references. /

B. Zemel'man

[Abstractor's note: Complete translation]

Card 1/1

31865
S/123/61/000/023/017/018
A052/A101

26.7/81

AUTHORS: Romanenko, S. V., Sheynkman, A. G.

TITLE: Temperature changes of the supersonic gas flow in a tube with heat elimination

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 23, 1961, 28, abstract 231175 ("Izv. Kiyevsk. politekhn. in-ta", no. 30, 1960, 31-37)

TEXT: A theoretical analysis is carried out of temperature changes of a one-dimensional supersonic flow passing in a tube with heat elimination at a constant temperature of the wall T_w . The analysis is based on the assumption that under above conditions the generalized hydrodynamic theory of heat exchange holds true. It has been found out that at a supersonic flowing in a tube at any $\bar{\epsilon} = \frac{T_0}{T_w}$ (T_0 - impact temperature) up to $\bar{\epsilon} \rightarrow \infty$ only deceleration of the flow can take place. Depending on the relation of $\bar{\epsilon}$ and M the temperature of the flow can increase and decrease. In the diagram ($\bar{\epsilon}$, M) the boundary line is found, which separates the regions of increase and decrease of the temperature and its asymptotes; when the boundary line is intersected by integral curves, the temperature in the flow reaches maximum (on its right-hand branch)

Card 1/2

Temperature changes of the supersonic ...

31865
S/123/61/000/023/017/018
A052/A101

and minimum (on the left-hand one). The position of the probable point of contact of one of the integral curves with the boundary line is determined. The temperature changes along this integral curve as well as along the curves below it have a monotonous character. The physical nature of the discussed phenomena is explained.

V. Kirillov

[Abstracter's note: Complete translation]

Card 2/2

X

ROMANENKO, S.V.

DECEASED
c1956

1961/3

SEE ILC

THERMODYNAMICS

ROMANENKO, T.I.

Influence of asphyxia on the survival period of newborn infants. Vop. okh.
mat. i det. 3 no.1:18-20 Ja-F '59 (MIRA 12:2)

1. Iz otdeleniya novorozhdennykh (zav. T.I. Tomanenko) Omsko~~e~~ rodil'nogo
doma imeni N.K. Krupskoy (glavnyy vrach M.A. Aleksandrova, nauchnyy rukovoditel
- prof. A.B. Gillerson).
(INFANTS (NEWBORN)) (ASPHYXIA)

ROMANENKO, V.

"Nestor" research reactor. (from "Nuclear Engineering", 5, no. 54, 1960)
Atom. energ. 10 no. 3:297-299 Mr '61. (MIRA 14:3)
(Great Britain--Nuclear reactors)

L 61891-65

ACCESSION NR: AP5019306

UR/0333/65/000/007/0035/0036
637.142.002.5

AUTHOR: Romanenko, V. (Engineer)

TITLE: Balancing the lids of vacuum devices

SOURCE: Molochnaya promyshlennost', no. 7, 1965, 35-36

TOPIC TAGS: vacuum equipment, vacuum, vacuum device 10

ABSTRACT: Equipment developed by the author for balancing lids on vacuum devices SONP-OS-200-2K is described. This equipment has been successfully applied at the Isil'-Kul' dairy plant. For balancing the lower lid, the apparatus shown on Fig. 1 of the Enclosure consists of a support 1, bracket 2, collar 3, bolt 4, plate 5, axle 6, split pin 7, roller 8, rod 9, upper brace 10, and counterweight 11. The operation of this device is described and shown diagrammatically. Apparatus for balancing the upper lid is fairly similar in design and in operation. The entire equipment may be handled by a single worker in spite of the large size and weight of the lids. Orig. art. has: 4 diagrams.

ASSOCIATION: Omskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta molochnoy promyshlennosti (Omsk Branch of the All-Union Scientific Research Institute of the Dairy Industry)

Card 1/3

L 61891-65

ACCESSION NR: AP5019306

SUBMITTED: 00

ENCL: 01

SUB CODE: IE,

NO REF SOV: 000

OTHER: 000

0

LS

Card 2/3

L 61891-65

ACCESSION NR: AP5019306

ENCLOSURE: 01

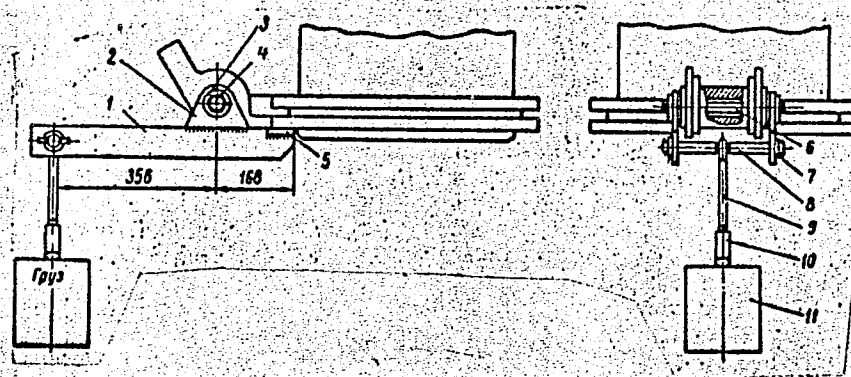


Fig. 1. Schematic drawing of equipment for balancing the lower lid of a vacuum device

dm
Card 3/3

ROMANENKO, V., polkovnik

From experience in the technical training of communications men.
Voen. eviaz. 16 no.3:7-9 Mr '58. (MIRA 11:4)
(Communications, Military--Study and teaching)

ROMANENKO, V.A.

Forecasting elements of spring high water in the left tributaries
of the middle Dnieper a long time in advance. Trudy UkrNIGMI no.15:
61-72 '58. (MIRA 12:7)

1.Upravleniye gidrometeorologicheskoy sluzhby USSR.
(Dniëper Valley--Floods)

Romanenko, V.A.
ROMANENKO, V.A.

Forecasting the maximum spring water levels in rivers of the basin
of the middle and lower Dnieper. Trudy Ukr. NIGMI no.9:102-112 '57.
(Dnieper Valley--Stream measurements) (MIRA 11:1)

ROMANENKO, V.A.

Study of losses of snow waters. Trudy UkrNIGMI no.39:3-13
'63. (MIRA 16:7)

(Runoff)

ROMANENKO, V.A.

Calculation and prediction of the amount of spring flooding
of small Ukrainian rivers, based on over-all territorial
relationships. Trudy UkrNIGMI no.39:14-29 '63.

(MIRA 16:7)

(Ukraine—Flood forecasting)

KUZNETSOV, I.A.; POLEZHAYEVA, S.I.; ROMANENKO, V.A., gornyy inzh.

Hydraulic mining equipment used in the development of the Lebedi open-pit mine. Gor.zhur. no.9:10-14 S '60. (MIRA 13:9)

1. Nachal'nik Gubkinskogo upravleniya tresta Gidromekhanizatsiya Ministerstva stroitel'stva elektrostantsiy (for Kuznetsov).
2. Glavnyy inzhener Gubkinskogo upravleniya tresta Gidromekhanizatsiya Ministerstva stroitel'stva elektrostantsiy (for Polezhayeva).
3. Filial Instituta gornogo dela AN SSSR na Kurskoy magnitnoy anomalii (for Romanenko).
(Lebedi (Belgorod Province)--Mining engineering)
(Hydraulic mining--Equipment and supplies)
(Kursk Magnetic Anomaly)

AKIM, L.Ye.; KARPINSKIY, M.N.; ROMANENKO, V.A.; ETINA, Yu.Ya.

Changes of the functional groups of viscose cellulose in the process
of its bleaching. Zhur.prikl.khim. 35 no.11:2534-2538 N '62.

(MIRA 15:12)

(Cellulose)

(Bleaching)

POLEZHAYEVA, S.I.; ROMANENKO, V.A.

Centrifugal loader for hydraulic transportation of unbound
rocks. Gor. zhur. no.7:67-68 J1 '63. (MIRA 16:8)

1. Nauchno-issledovatel'skiy institut po problemam Kurskoy
magnitnoy anomalii, g. Gubkan.

ROMANENKO, V.A.

Calculation of the runoff coefficients of snow waters for
hydrologic forecasts. Trudy Ukr NIIMI no.46:37-47 '64.
(MIRA 17:10)

ROMANENKO, V.A.

Loading apparatus for high-pressure hydraulic conveying of coal,
ore, and overburden rocks. Gor.zhur. no.1:77 Ja '63.

(MIRA 16:1)

(Hydraulic conveying--Equipment and supplies)

MAKSIMOV, Vladimir Fedorovich, dotsent, kandidat tekhnicheskikh nauk;
ROYTMAN, K.Ya., retsenzent; SHISHOV, I.A., retsenzent; ROMANENKO,
V.A., retsenznet; MALYSHEV, K.N., redaktor; ARKHIPOV, K.N.,
redaktor; SARMATSKAYA, G.I., redaktor izdatel'stva; SHITS, V.P.,
tekhnicheskii redaktor

[Safety engineering and fire prevention in the paper industry]
Tekhnika bezopasnosti i protivopozharnaia tekhnika v tselliulozno-
bumazhnom proizvodstve. Moskva, Goslesbumizdat, 1956. 242 p.
(MLRA 10:2)

(Factories--Fires and fire prevention)
(Paper industry--Safety measures)

ROMANENKO, V.A.

Computing snow melt. Trudy Ukr. NIGMI no.6:67-69 '56. (MLRA 10:5)

(Snow) (Thawing)

ROMANENKO, V.A.

Determining the moisture of soils from general territorial
relationships. Trudy Uchebno-Nauchnoy no.30:3-18 '61. (MIRA 15:1)
(Soil moisture)

ROMANENKO, Y. P.

Role of the liver in calcium metabolism. Dop. AN URSR no. 9:1222-
1984 '85. (MIRA 18:9)

I. Institut fiziologii AN UkrSSR.

ROMANENKO, V. D. Cand Vet Sci -- (diss) "Change ⁱⁿ ~~of the~~ evacuation activity
of the gastrointestinal tract during chronic obstruction. (Experimental studies)."
Kiev, 1958. 19 pp (Min of Agriculture UkSSR. Ukrainian Acad Agr Sci), 100
copies (KL, 14-58, 116)

ROMANENKO, V.D., inzh.; KRAVETS, V.P., inzh.

Automation of the casting of lead seals. Zhel.dor.transp. 45 no.7:
81 J1 '63. (MIRA 16:9)
(Molding(Founding)) (Automatic control)

ROMANENKO, V.D. (Volgograd); KRAVETS, V.P., inzh. (Volgograd)

Overhead washing apparatus for box car cleaning. Zhel.dor.transp.44
no.12:72-73 D '62. (MIRA 15:12)

1. Glavnyy inzh. Volgogradskogo otdeleniya Privolzhskoy dorogi
(for Romanenko)

(Railroads—Freight cars—Cleaning)

ROMANENKO, V.D.; LAKHIN, P.V.

Methodology of studying the formation of bile in chronic
experiments. Fiziol. zhur. [Ukr.] 9 no.4:555-557 J1-Ag '63.
(MIRA 17:10)

1. Institut fiziologii im. Bogomol'tsa AN UkrSSR, Kiyev.

ROMANENKO, V.D.

Content of various electrolytes in the bile (Na, K and Ca) and their determination by the flame photometry method. Fiziol.zhur. [Ukr] 9 no.3:392-392 My-Je '63. (MIRA 18:1)

1. Institut fiziologii im. Bogomol'tsa AN UkrSSR, Kiyev.

USSR / Human and Animal Physiology. Digestion, Intestine.

T

Abs Jour : Ref Zhur - Biol., No 15, 1958, No. 70295

Author : Romanenko, V. D.

Inst : Kiev Veterinary Institute

Title : Changes in the Evacuational Capacities of the Gastro-intestinal Tract in Chronic Intestinal Obstruction (An Experimental Study)

Orig Pub : Tr. Kiyevsk. vet. in-t, 1957, Vol 13, 229-236

Abstract : No abstract given

Card 1/1

ROMANENKO, V.O.

Role of the liver in the excretion of calcium from the body. Fiziol.
zhur. [Ukr.] 11 no.1:82-94. Ja-F '65. (MIRA 18:7)

1. Laboratoriya fiziologii vydeleniya Instituta fiziologii im. A.A.
Bogomol'tsa AN UkrSSR, Kiyev.

ROMANENKO, V.F.; GAVRILOV, V.I.

Adaptation of the sheep pox virus to KEM-La tissue cultures.
Vop. virus. 8 no.1:48-52 Ja-F'63. (MIRA 16:6)

1. Vsesoyuznyy institut eksperimental'noy veterinarii i Gosu-
darstvennyy kontrol'nyy institut meditsinskikh biologicheskikh
preparatov imeni L.A.Tarasevich.
(SMALLPOX IN ANIMALS) (VIRUS RESEARCH)
(TISSUE CULTURE)

ROMANENKO, V.F.; SYURIN, V.N.

Study of the biological properties of cultural variants of
sheep pox virus. Vop. virus 8 no.2:224-229 Mr-Ap'63
(MIRA 16:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy
virusologii i mikrobiologii Ministerstva sel'skogo khozyaystva
SSSR, Moskva.

L 10355-66 EWT(1)/EWA(j)/EWA(b)-2 JK
 ACC NR: AP5028189 SOURCE CODE: UR/0346/65/000/009/0011/0014
 AUTHOR: Syurin, V. N.; Romanenko, V. F.; Dryagalin, N. N.; Onufriyev, V. P.
 ORG: All-Union Research Institute of Foot and Mouth Disease (Vsesoyuznyy nauchno-issledovatel'skiy yashchurnyy institut)
 TITLE: Principles in studying the genetic characteristics of foot and mouth disease virus
 SOURCE: Veterinariya, no. 9, 1965, 11-14
 TOPIC TAGS: virus disease, foot and mouth disease, vaccine, virus genetics, veterinary medicine
 ABSTRACT: Two conclusions emerge from this survey of the literature (79 Soviet and foreign references) on new approaches to directed variability of the foot and mouth disease virus. First, no method of adaptation variability of this virus is now conceivable without simultaneous utilization of the methods of selection of a virulent clones because the genetic heterogeneity of the virus population inevitably increases in the course of adaptation at any given period. The clone selection method is useful here in shortening the time required for obtaining vaccinal strains experimentally. Second, during adaptation the virus initially loses its specific pathogenicity for naturally susceptible animals while retaining for some time (depending on the biological properties of the strain and method of attenuation) its antigenic and im-
 Cord 1/2 UDC: 619 : 616.986.43=095.57

L 10355-66

ACC NR: AP5028189

munogenic properties. This period of practical value of the virus as a vaccinal strain is related to a host of genetic characteristics which must be carefully studied by the investigator. Unless these characteristics are taken into account, further attenuation will definitely result in a loss of the virus' immunogenic properties. The authors state that an absolute prerequisite for the preparation of hoof and mouth disease vaccine is an intensive study of the virus' genetic characteristics and their connection with the vaccine's avirulence and immunogenicity. If this is ignored, the final product will be hyperattenuated, non-immunogenic, and virtually useless.

SUB CODE: 06/

SUBM DATE: 00/

ORIG REF: 008/

OTH REF: 071

PC
Card 2/2

CAVRILOV, V.I.; DEMIDOVA, S.A.; ROMANENKO, V.F.

Differentiation of transplanted cell strains by their sensitivity to viruses. Vop. virus no.6:722-734 M-F '69. (MIRA 17:6)

1. Kontrol'nyy institut meditsinskikh biologicheskikh preparatov imeni L.A. Tarasevicha, Institut virusologii imeni D.I. Ivanovskogo AMN SSSR i Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy virusologii i mikrobiologii, Moskva.

VLASENKO, N.A.; ROMANENKO, V.F.

Electroluminescence of CdS single crystals. Opt. i spektr.
16 no. 4:642-650 Ap '64. (MIRA 17:5)

ROMANENKO, V.F.

Experiments with corn on a school plot. Biol. v shkole no.3:87-
88 My-Je '57. (MLRA 10:6)

1. Tsentral'naya stantsiya yunykhn naturalistov g. Minska.
(Corn (Maize)) (Minsk--Agriculture--Study and teaching)

ROMANENKO, V. G. with DUKALOV, I-A. and SKAVYSH, M.F.

"The Use of Puppies as Experimental Animals in the Study of Leptospirosis,"

Veterinariya No. 1, 1950.

Cand. Biological Sci.

Mbr., Novocherassk Sci. Res. Veterinary Exptl. Sta., -cl950-.

ROMANENKO, V. G.

"Study of the Immunological Properties of Some Strains of Leptospirae, the Causative Agents of Water Fever in Humans and Animals," Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 1, 1953.

Rostov Oblast Veterinary Experimental Station

ROMANENKO, V.I.; PODPRIGORA, M.G.; MASLAKOVA, Z.I.

Automation of the rectification process of turpentine. Gidroliz.
i lesokhim. prom. 14 no.7:10-11 '61. (MIRA 14:11)

1. TSentral'nyy nauchno-issledovatel'skiy i proyektnyy institut
lesokhimicheskoy promyshlennosti (for Romanenko, Podoprigora).
2. Gor'kovskiy kanifol'no-terpentinnyy zavod (for Maslakova).
(Turpentine industry—Equipment and supplies)
(Automatic control)

ROMANENKO, V.I.

Microbiological study of Lake Onega, Vygozero Reservoir and
lakes of the White Sea-Baltic Canal region. Mikrobiologiya
34 no.2:350-356 Mr-Apr '65. (MIRA 18:6)

1. Institut biologii vnutrennikh vod AN SSSR.

ROMANENKO, V.I.

Wear of chain bucket parts in a multi-bucket dredge and ways to avoid
it. Gor.zhur. no.8:50-53 Ag '55. (MLRA 8:8)
(Dredging machinery)

NESMEYANOV, A.N.; SAZONOVA, V.A.; ROMANENKO, V.I.; ZOL'NIKOVA, G.P.

Photolysis of 1,1'-ferrocenedicarboxylic acid. Izv. AN SSSR.
Ser. khim. no.9:1694-1695 '65. (MIRA 18:9)

1. Moskovskiy gosudarstvennyy universitet.

L 31361-66 EWP(j)/EWT(m) IJP(c) RM

ACC NR: AP6021101

SOURCE CODE: UR/0062/66/000/002/0357/0357

50
B

AUTHOR: Nesmeyanov, A. N.; Romanenko, V. I.; Sazonova, V. A.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Basicity constants of amines of ferrocene

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 2, 1966, 357

TOPIC TAGS: ferrocene, amine, solution acidity, potentiometer, titrimetry, distillation, buffer solution, chemical neutralization, alkyl radical/pH - M4c potentiometer

ABSTRACT: Basicity constants of ferrocenylamine, ethyl ferrocenylamine, diethylferrocenylamine, 1,1'-chloroferrocenylamine, and alpha-pyridylferrocene were determined by potentiometric titration in 80% (by weight) ethanol in 0.025 N HCl on a pH - M4c type potentiometer, with G 200B glass electrode. Solvents were prepared as follows: distilled water was twice redistilled over alkaline potassium permanganate in equipment protected with ascarite-filled tubes; purchased absolute alcohol was treated with sodium (6 grams of sodium per liter of alcohol) and distilled, and the first and last quarter portions were rejected. The titration method is conventional; placement of electrodes was in a biphthalate buffer (pH 4.01), temperature $22 \pm 1^\circ$, and amine concentration 0.005 M. Basicity constants of the amines were determined for three degrees of neutralization (35, 50 and 65%); for each point, 6-9 measurements were made; the spread of pH values did not exceed 0.05. Comparison of basicity constants of N-alkylated ferrocene amines with those of aromatic and aliphatic amines shows that in the ferrocene series the effect of the alkyl group is the same as in the aliphatic series.

Orig. art. has: 1 table. [JPRS]

SUB CODE: 07 / SUBM DATE: 02Jul65 / ORIG REF: 004 / OTH REF: 002

Card 1/1 CC

UDC: 541.124.7 + 547.233 + 546.72

ROMANENKO, V.I.

Potential capacity of the microflora of silt sediments to the heterotrophic assimilation of carbon dioxide and chemical synthesis. Mikrobiologiya 33 no.1:134-139 Ja-F '64. (MIRA 17:9)

1. Institut biologii vnutrennikh vodoyemov AN SSSR.

ROMANENKO, V.I.

Potential capacity of water microflora for heterotrophic carbon dioxide assimilation and chemosynthesis. Mikrobiologiya 32 no. 4:663-674 J1-Ag '63. (MIRA 17:6)

1. Institut biologii vodokhranilishch AN SSSR.

ROMANENKO, V.I.

General microbiological characteristics of Tashkepri and Sary-Yazy
Reservoirs. Trudy Inst. biol. vnutr. vod no.6:10-14 '63.
(MIRA 18:1)

KUZNETSOV, S.I.; ALIVERDIYEVA, L.A.; ROMANENKO, V.I.

Microbiological characteristics of Chir-Yurt Reservoir. Dokl.
AN SSSR 161 no.2:469-471 Mr '65. (MIRA 18:4)

1. Institut biologii vnutrennikh vod AN SSSR i Dagestanskoye
otdeleniye Kaspiyskogo nauchno-issledovatel'skogo instituta
rechnogo i ozernogo khozyaystva. 2. Chlen-korrespondent AN
SSSR (for Kuznetsov).

NESMEYANOV, A.N., akademik; SAZONOVA, V.A.; ROMANENKO, V.I.

Diferrocenylamine. Dokl. AN SSSR 161 no.5:1085-1088 Ap '65.
(MIRA 18:5)

1. Moskovskiy gosudarstvennyy universitet.

POWERS, M.K.

Heterotrophic CO₂ assimilation by water bacterial flora.
Mikrobiologiya 33 no.4:677-683 51-Aug '64. (MIRA 18:6)

1. Institut biologii, vysshennikho veda AN SSSR.

L 53998-65 EWT(m)/EPF(c)/EWP(j)/EWA(c) PC-4/Pr-4 RPL JH/RM
 UR/0020/65/161/005/1085/1088
 37
 36
 B

ACCESSION NR: AP5011531

AUTHORS: Nesmeyanov, A. N. (Academician); Sazonova, V. A.; Romanenko, V. I.

TITLE: Diferrocenylamine

SOURCE: AN SSSR. Doklady, v. 161, no. 5, 1965, 1085-1088

TOPIC TAGS: amine group, alkylation, degradation reaction, acetylene, reduction, ferrocene

ABSTRACT: The authors have previously reported on obtaining n-ethyl-ferrocenyl-amine and n-phenylferrocenylamine by heating the sodium derivative of n-acetylferrocenylamine with bromoferrocene in the presence of Cu_2Br_2 . All experimental attempts to hydrolyze amide to diferrocenylamine have been unsuccessful. This differs from results with n-acetylphenylferrocenylamine. When boiled in alcohol with KOH, n-acetyldiferrocenylamine remains unchanged. When heated for a long time, it gradually decomposes. Acid hydrolysis leads rapidly to complete destruction of the ferrocene system. Diferrocenylamine may be obtained by reduction splitting of n-acetyldiferrocenylamine by lithium aluminum hydride. Splitting is dominant only when 0.25 mole of LiAlH_4 per mole of amide is used.

Card 1/2

L 53998-65

ACCESSION NR: AP5011531

With large excess of LiAlH_4 , splitting and reduction produce comparable yields.

Diferrocenylamine resembles diphenylamine in some properties, as it is not extracted from benzene solutions by dilute acid, but is dissolved in concentrated HCl. It forms chlorohydrate when HCl is introduced into an ether solution of amine. Diferrocenylamine is alkylized by boron fluoride triethyl oxonium. During reduction of n-acetylferrocenylamine and n-benzoylferrocenylamine by lithium aluminum hydride, ethylferrocenylamine and benzylferrocenylamine respectively are formed, with corresponding yields of 94 and 86%. The alkylation of these by boron fluoride triethyl oxonium gives ethylbenzylferrocenylamine. Orig. art. has: 4 formulas.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University)

SUBMITTED: 09Dec64

ENCL: 00

SUB CODE: 00, 00

NO REF SOV: 002

OTHER: 001

Card 2/2

ROMANENKO, V.I.

Comparative characteristics of microbiological processes in
different reservoirs. Trudy Inst.biol.vnutr.vod. no.9:
233-246 '65.

(MIRA 19:1)

ROMANENKO, V.I.

Relation between the quantities of O_2 and CO_2 consumed by
heterotrophic bacteria. Dokl. AN SSSR 157 no.1:178-179
Jl '64 (MIRA 17:8)

1. Institut biologii vnutrennikh vod AN SSSR. Predstavleno
akademikom A.A. Imshenetskim.

KOZLOVA, Ye.I.; GORBENKO, Yu.A.; ROMANENKO, V.I.

Comparative studies of the microflora of the rhizosphere of
woody plants and some characteristics of its carbon metabolism.
Vest. Mosk. un. Ser. biol. nauk. 18 no.3:35-42 My-Je'63
(MIRA 17:1)

1. Kafedra mikrobiologii Moskovskogo universiteta.

KUZNETSOV, S.I.; ROMANENKO, V.I.; GLAZUNOV, V.I.

Production of organic matter at the expense of the photosynthesis of phytoplankton in Lake Baikal. Dokl. AN SSSR 156 no.6:1444-1447 Je 164. (MIRA 17:8)

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I. 14864-65 EWT(m)/EPF(c)/EPR/EWP(j) Pc-4/Pr-4/Ps-4 RPL RM/WW

ACCESSION NR: AP4043548

S/0020/64/157/004/0922/0925

AUTHOR: Nesmeyanov, A. N.; Sazonova, V. A.; Romanenko, V. I. B

TITLE: Derivatives of ferrocenylamine 4

SOURCE: AN SSSR. Doklady*, v. 157, no. 5, 1964, 922-925

TOPIC TAGS: ferrocenylamine, ferrocenylamine derivative, synthesis, diphenylferrocenylamine, tertiary aromatic amine, monophenylferrocenylamine, secondary aromatic amine, azoferrocene, oxidation, chloroferrocenylamine, dichloroazoferrocene, chloroferrocenylamine purification

ABSTRACT: Several derivatives of ferrocenylamine were synthesized and their properties were studied. Bromoferrocene reacted with sodium diphenylamine in the presence of CuBr to form diphenylferrocenylamine, a typical tertiary aromatic amine. Bromoferrocene reacted with sodium acetanilide in the presence of CuBr to form monophenylferrocenylamine (I). The secondary amine I was not extracted by dilute HCl, but formed the chlorohydrate with concentrated

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ACCESSION NR: AP4043548

HCl and the benzoyl derivative with benzoyl chloride. Ferrocenylamine (II) reacted with iodobenzene in the presence of CuI to form azoferrocene (III), and not I. II was oxidized quantitatively to III by atmospheric oxygen in benzene solution at room temperature in the presence of CuBr or CuCl. Substituents on the ferrocene nucleus affected its rate of oxidation. Thus 1-(1'-chloroferrocenyl) amine (IV) oxidized to dichloroazoferrocene more slowly than II oxidized to III. IV is a yellow crystalline material, melting at 116C; its acetyl derivative melts at 124.5C. It can be obtained from 1-(1'-chloroferrocenyl)boric acid and copper phthalimide. Since IV oxidized much more slowly, it can be readily purified of II. Orig. art. has: 5 equations.

ASSOCIATION: None

SUBMITTED: 29Apr64

ENCL: 00

SUB CODE: OC, MT

NO REF SOV: 004

OTHER: 002

Card 2/2

NESMEYANOV, A.N., akademik; SAZONOVA, V.A.; ROMANENKO, V.I.

Alkylation of ferrocenylamine. Dokl. AN SSSR 152 no.6:1358-
1359 0 '63. (MIRA 16:11)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.